IN THE CLAIMS:

The status and content of each claim follows.

1. (original) A method of forming an electrolyte, comprising:

removably coupling a perimeter support to a temporary substrate; and

electrodepositing an electrolyte composite film on said temporary substrate.

2. (original) The method of claim 1, wherein said electrolyte composite film comprises a structural material and an electrolyte material.

3. (original) The method of claim 2, wherein said electrolyte material comprises perfluorosulfonate ionomer particles.

4. (original) The method of claim 2, wherein said structural material comprises ceramic particles.

5. (previously presented) The method of claim 1, wherein said perimeter support comprises a gasket that is immersed in an electrodeposition solution on said temporary substrate.

6. (original) The method of claim 1, wherein said temporary substrate comprises an electrode.

7. (original) The method of claim 6, wherein said electrode comprises a negatively charged electrode.

8. (original) The method of claim 1, wherein said temporary substrate comprises a metallic material.

9. (original) The method of claim 8, wherein said metallic material comprises nickel.

10. (original) The method of claim 8, wherein said metallic material comprises stainless steel.

11. (original) The method of claim 1, wherein removably coupling said perimeter support comprises depositing a release material on said temporary substrate prior to electrodepositing said electrolyte composite film.

12. (original) The method of claim 1, wherein said electrodepositing said film comprises electrophoretic deposition.

13. (original) The method of claim 1, further comprising electrodepositing a layer of ions on said electrolyte composite film.

14. (original) The method of claim 13, wherein said layer of ions comprises at least one of perfluorosulfonate ionomers or sulfonate polyetherketones.

15. (original) The method of claim 13, wherein said electrodepositing of said layer of ions comprises electrolytic deposition.

16. (original) The method of claim 13, wherein electrodepositing said layer of ions seals said electrolyte composite film.

17. (previously presented) A method of forming an electrolyte, comprising:

removably coupling a perimeter support to a temporary substrate; and

electrodepositing an electrolyte composite film on said temporary substrate.

wherein said electrolyte composite film and said perimeter support comprise an electrolyte assembly and further comprising removing said electrolyte assembly as an integral unit from said temporary substrate.

18. (original) The method of claim 13, wherein electrodepositing said electrolyte composite film comprises electrophoretic deposition and electrodepositing said layer of ions comprises electrolytic deposition.

19-52. (cancelled)

53. (previously presented) The method of claim 1, further comprising simultaneously electrodepositing electrolyte particles and structural particles to form a single layer of said electrolyte composite film.

54. (previously presented) The method of claim 1, wherein said electrolyte composite film conducts ions when moisture is present.

55. (previously presented) The method of claim 1, further comprising forming a cathode and anode on opposite sides of said electrolyte film.

56. (previously presented) The method of claim 1, wherein said electrodepositing is performed by placing said temporary substrate in a solution already comprising polymer units and attracting those polymer units to said temporary substrate using an electric field.

57. (previously presented) A method of forming a fuel cell electrolyte, comprising:

disposing a temporary substrate in a solution already comprising polymer units; and

electrodepositing said polymer units on said temporary substrate so as to form said fuel cell electrolyte on said temporary substrate.

58. (previously presented) The method of claim 57, wherein said polymer units comprise perfluorosulfonate ionomer particles.

59. (previously presented) The method of claim 57, wherein said solution further comprises ceramic particles, said electrodepositing also causing said ceramic particles to migrate to said temporary substrate such that said fuel cell electrolyte is a composite of said polymer units and said ceramic particles.

60. (previously presented) The method of claim 57, further comprising disposing a perimeter support on said temporary substrate which provides perimeter support for said fuel cell electrolyte.

61. (previously presented) The method of claim 57, further comprising depositing a release material on said temporary substrate prior to forming said fuel cell electrolyte, said release material facilitating removal of said fuel cell electrolyte from said temporary substrate.

62. (previously presented) The method of claim 57, further comprising electrodepositing a layer of ions on said electrolyte composite film, wherein said layer of ions is thinner than said fuel cell electrolyte.

63. (previously presented) The method of claim 62, wherein said layer of ions comprises at least one of perfluorosulfonate ionomers or sulfonate polyetherketones.

64. (previously presented) The method of claim 17, further comprising electrodepositing a layer of ions on said electrolyte composite film.

65. (previously presented) The method of claim 64, wherein said layer of ions is thinner than said electrolyte composite film.

66. (previously presented) The method of claim 64, wherein said layer of ions comprises part of said electrolyte assembly and is removable as part of said integral unit from said temporary substrate.

67. (previously presented) The method of claim 17, wherein said electrolyte composite film conducts ions when moisture is present.

68. (previously presented) The method of claim 17, further comprising forming a cathode and anode on opposite sides of said integral unit

69. (previously presented) The method of claim 17, wherein said electrodepositing is performed by placing said temporary substrate in a solution already comprising polymer units and attracting those polymer units to said temporary substrate using an electric field.

70. (previously presented) The method of claim 17, wherein said electrolyte composite film comprises a structural material and an electrolyte material.

71. (previously presented) The method of claim 70, wherein said electrolyte material comprises perfluorosulfonate ionomer particles.

72. (previously presented) The method of claim 70, wherein said structural material comprises ceramic particles.

73. (new) The method of claim 1, wherein said electrodepositing said electrolyte composite film couples said composite film to said perimeter support which supports a perimeter of said composite film.